GENERATOR, SIGNAL, CW

GE0TK-C

1.0 GENERAL DESCRIPTION This procurement requires a solid-state, CW Signal Generator capable of generating a constant amplitude sine wave with a variable frequency range of 250 kHz to 250 MHz.

2.0 CLASSIFICATION The equipment shall meet the requirements of MIL-T-28800( ), Type III, Class 5, Style E, Color R for Navy shipboard, submarine, and shore applications with the following modifications and exceptions:

a. The relative humidity requirement is limited to 95% non-condensating.

b. The operating and non-operating altitude requirements are not invoked.

c. The Electromagnetic Interference requirements of MIL-T-28800( ) are limited to CE01, CE03, CS01, CS02 (0.05 to 100 MHz), CS06, RE01 (back panel search excluded), RE02 (14 kHz to 1 GHz), and RS03.

d. The warm-up time is extended to one hour.

3.0 OPERATIONAL REQUIREMENTS The equipment shall be capable of generating signals within the parameters and accuracies specified herein.

3.1 Frequency Characteristics

3.1.1 Frequency Range: At least 250 kHz to 250 MHz

3.1.2 Resolution: At least 3 Digit display

3.1.3 Accuracy: ±0.7 of least significant digit for indicated frequency

3.1.4 Spectral Purity (Equal to or better than limits specified below)

3.1.4.1 Harmonics: 2nd harmonic at least -35 dBc, 3rd and higher harmonics at least -40 dBc

3.2 Output Characteristics

3.2.1 Range: At least 5.0 mV to 5.5 Vp-p into 50 ohm termination

3.2.2 Accuracy: Within at least 5% of indicated amplitude (50 kHz reference)

3.2.3 Flatness (peak to peak, 50 kHz reference): At least ±1.5% from 250 kHz to 100 MHz; at least ±3% from 100 to 250 MHz

3.2.4 Output Impedance/Connector: 50 ohms; BNC type connector

4.0 GENERAL REQUIREMENTS

4.1 Power: 115/230 Vac ±10%, 50, 60, or 400 Hz ±10%, 250 VA maximum

4.2 Dimensions: The total volume shall not exceed 5,867 cm3 (358 in3).

4.3 Weight: The overall weight shall not exceed 4.5 kg (10 pounds).

4.4 Calibration Interval: The calibration interval shall be 12 months minimum. The equipment shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.